

UML Shuttle

A PUBLICATION OF THE UNIVERSITY OF MASSACHUSETTS LOWELL

UML Student Takes Top Honors at EPA

Nagarajan Wins Award for Green Tea Research

Green tea makes a potent brew for graduate student Subha Nagarajan, who won a \$75,000 grant from the Environmental Protection Agency (EPA). With the funding, she will further develop her research into promising anti-cancer compounds that are synthesized from a component of green tea using environmentally benign, green chemistry methods.

More than 350 university students, comprising 42 teams, gathered on the National Mall in Washington, D.C., to compete for the EPA's second annual P3 (People, Prosperity, Planet) Award. The P3 program encourages the development of sustainable technologies that lead to commercialization. The students showcased their research entries to the public at the National Sustainable Design Expo, set up in a tent on the Mall for two days before the awards ceremony.

The exchange of ideas with other teams was terrific, but the competition was fierce, as just six projects were chosen for awards.

"I was so sure I wouldn't win, that I told my father not to attend the awards ceremony," says Nagarajan, whose father was covering the event as a journalist from India. "The judges asked very tough questions, but Dr. Kumar had asked me at least fifty percent of those same questions before! He is everything you could hope for as an advisor." Physics Prof. Jayant Kumar, director of the Center for Advanced Materials, heads the research project in collaboration with Prof. Susan Braunhut of the Biological Sciences Department.

Research results are promising, as the new compound inhibits cancer cells in lab conditions, while leaving adjoining normal cells unharmed. Anti-cancer drugs are needed: In the U.S. alone, one in four deaths is caused by cancer. In the proposal abstract, Nagarajan writes, "Ironically, most drugs that are used to treat cancer are synthesized using multiple steps that involve the use of carcinogenic chemicals." If the research is fully successful, "the synthesis of anti-cancer drugs from bio-



▲ Subha Nagarajan

based materials, using green methods, will cause a paradigm shift in the development of cancer drugs."

Donna McIntosh, research scientist on the project, writes about the display on the Mall: "We were the odd duck in some ways, as most of the projects were engineering and sustainability models."

Many tourists, Congressional aides, EPA staff and other government officials visited. Some schoolchildren with their teachers also came to hear about our work, after visiting the nearby Smithsonian museums.

When asked by the teacher if they knew what 'cancer' meant, one young boy answered that his mother had cancer and asked Subha if he could take a vial of the catechin home to his mother. We regretted to say no, but we were encouraged to work all the harder for the future. "I wish this little boy could have seen Subha going on stage to collect her award, and know how much both his question, and the P3 award, inspired her to press on."

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Griffin Honored for Merit in Research Administration

National Council of University Research Administrators Gives Award

Louise Griffin, vice chancellor for Administration and Finance, has received the 2006 Merit Award for the New England Region of the National Council of University Research Administrators (NCURA). The award is given to recognize and promote outstanding achievement in research administration.

Griffin is a past chair and treasurer of NCURA, serves on several advisory committees and has co-chaired three regional spring meetings. She represents the region as a member of the NCURA National Nominating and Leadership Development Committee.

Griffin was cited for her service to the organization, that "over the years has benefited each and every member of our region. Her diligence and positive attitude have brought many ideas and projects to life. She has worked hard for us and with us, set examples for her colleagues and made us laugh at every turn."

Griffin is a member of the National Association of College and University Business Officers and is also the University's administrative representative to the Federal Demonstration Partnership (FDP).



▲ Louise Griffin

Morse Endowment Campaign Kicks Off



▲ The F. Bradford Morse Endowment for the Study of International Relations, Sustainable Development and Peace, named for the late congressman from Lowell and long-time United Nations official, kicked off at a luncheon meeting on campus. From left are Timothy Rothermel, formerly of the U.N. and long-time Morse family friend; Congressman Marty Meehan, chair of the endowment committee; Chancellor William Hogan; and State Sen. Steven Panagiotakos. The endowment will fund an annual distinguished lecture series and support the university's award-winning student international relations program, as well as the new high school model U.N. The goal is to reach \$1 million in five years.

Green Chemistry Student Wins NSF Fellowship

Ingalls Works on Replacement Materials for Electronics

Laura Ingalls, first year doctoral student in the Green Chemistry Program, has her work cut out for her—and the funding to do the job. Ingalls has won a three-year, \$131,500 research fellowship grant from the National Science Foundation, under the program for promoting science in the community. The grant begins in June.

Ingalls joins a research group in green chemistry that is investigating environmentally benign

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IN OTHER NEWS

Critical Issues Sessions —

Vice Chancellor Diana Prideaux-Brune says Critical Issues sessions have been "very useful."

Student Group Receives National Excellence Award

The Collegiate Chapter of MENC received the MENC National Collegiate Chapter of Excellence Award

Online Auction—Bidding has been fast and furious during the online auction to benefit the Costello Gym renovations.

To see these and other stories, go to UMass Lowell's new online eNews Web site at www.uml.edu/enews

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UML Student Takes Top Honors at EPA

Nagarajan, in emphasizing the collaborative nature of research, gives credit to members of the team and suggestions from other groups. Among them are U. S. Army scientists Dr. Lynne Samuelson and Dr. Ferdinando F. Bruno (Dr. Bruno was the first to realize the potential of these compounds as anti-cancer agents); Prof. Braunhut's group; Dr. Ram Nagarajan (who obtained additional funding) and Sandhya Nagarajan; Chancellor William T. Hogan, for support through the Chancellor's seed grant; Prof. Kenneth Geiser; Pamela Civie of the Toxics Use Reduction Institute; and Prof. John Warner and his group.

—SS



▲ Dr. George Gray, assistant director of EPA's Office of Research and Development, presents the P3 Award to Subha Nagaraja.

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Green Chemistry Student Wins NSF Fellowship

photoresist materials to be used in electronics and other industries, using thymine copolymers. The new copolymers would replace the coating material used in making printed circuit boards. Most importantly, an enzyme from *e coli* can be used to make the polymers biodegradable and recyclable.

"Think about what happens to all the components in a printed circuit board at the end of its usable life," says Ingalls. "What we're developing is a material that can change condition. First we use ultraviolet light to make the polymer crosslink—it becomes water insoluble and is usable in electronics. At the end of its life, we break the bond—it becomes water soluble and degradable—using an enzyme."

Ingalls is working on isolating an enzyme and inhibitor combination—a sort of trigger mechanism—



▲ Laura Ingalls, first year doctoral candidate in Green Chemistry.

for controlled release to undo the crosslinking. She is also investigating other enzymes that are more robust and less temperature-sensitive.

Ingalls is a graduate of Stonehill College and lives in Brooklyn, Conn.

—SS

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Assistive Tech Design Fair Packs Cumnock With Ingenuity

A team from Fitchburg was all volunteers, mostly physics students, who met after school to design a brightly-lit reading magnifier for a woman who has lost some of her eyesight as a result of a brain tumor. "They went through many iterations," says Prime, "and created this beautiful, slim line product. The small magnifying bar is backlit with LEDs, and includes a feature to help her focus on one line of text at a time and to keep her place. Their product worked perfectly and was so professionally done that it looked like something you would buy in a store."

Another spectacular effort used a different approach. The Whittier Regional Technical High School team of 17 students worked within an electronics course, collaborating with other course areas, such as CAD and

machining. They designed and produced a locker remote control for a student with cerebral palsy, so that she could get into her locker as quickly as other students, who have more dexterity. "Every part of the project connected to the curriculum," says Prime.

Besides being a source of great satisfaction for the students and their coaches, the Design Fair is attracting corporate and University support. This year's sponsors were the Tyco Electronics Foundation, 3M Touch Systems and Philips Medical Systems, as well as the College of Engineering. In addition, Dean John Ting has established a Dean's Scholarship for entering freshmen who have participated in the program: a four-year renewable grant at \$2,000 annually.

UML Recognized by EPA for Lead-Free Project

Shina and Morose Receive Environmental Merit Award

Mechanical Engineering Prof. Sammy Shina and Greg Morose, Toxics Use Reduction Institute project manager, received an Environmental Merit Award from the U.S. Environmental Protection Agency recently at a Faneuil Hall ceremony.

Led by Shina and Morose, the New England Lead-Free Consortium, a group of industry, academic, and government organizations, was honored for a five-year effort to find new lead-free alternatives for the electronics industry. Lead, a toxic chemical

that has been linked to health and behavioral problems, is commonly found in solder used in disposable electronic equipment that ends up in landfills and incinerators.

This project is expected to remove approximately 6,500 pounds of lead per year from the Massachusetts electronics industry.

"Excellent technical work, great team building skills, and a lot of sweat equity went into this project. Sammy, Greg and all the Consortium members are to be commended for staying the course and making Massachusetts safer for everyone," said Michael Ellenbecker, director of the Toxics Use Reduction Institute.

EPA Administrator Stephen L. Johnson was the keynote speaker. Robert W. Varney, regional administrator for EPA's New England Office, presented the awards to 19 winners from Massachusetts.

In a statement from the EPA, Varney said, "These awards are among the highest honors EPA can bestow to recognize environmental accomplishments. The work of these individuals, organizations and businesses reflects the best attributes of New Englanders, working to find solutions to environmental issues. I offer my gratitude for their extraordinary contributions in protecting the environment."



▲ Greg Morose and Sammy Shina.

University Retirees Honored at Cumnock Hall Luncheon

A celebration honoring 14 UMass Lowell faculty and staff members—who retired this year or during the previous two years—was held in mid May in Cumnock Hall.

Chancellor William T. Hogan and other University officers were on hand at the buffet luncheon to thank the retirees for their years of service and to wish them well in coming years.

The 14 were Noel Cartwright, Thomas Davey, Nancy Desmond, Jean Doubleday, Eleanor Ellis, May Futrell, Lloyd Kannenberg, Jacob Lam, Kuang-pang Li, John McCaffrey, Arlene McGrory, Raymond Smith, Jerry Waldman and George Zaharoolis.



▲ Among the 2004-06 retirees being honored at a May luncheon in Cumnock Hall were, seated, Nurse Practitioner Eleanor Ellis and Counseling Center Director Noel Cartwright and, standing from left, Prof. Jacob Lam of Clinical Laboratory and Nutritional Sciences, former Nursing Department Chair May Futrell and Assoc. Prof. Arlene McGrory of Nursing.

Chancellor's Retirement Reception Scheduled for June 29

Members of UML Community Invited to Event in Alumni Lounge

A reception for William T. Hogan, who will retire in July as chancellor of the University, will be held on Thursday, June 29, from 2 to 5 p.m. in the Alumni Hall lounge on UML North.

All members of the University community are invited to attend the farewell event and extend best wishes to the man who has been head of the University for a quarter of a century.

Dr. Hogan, who came to Lowell in 1963 as an associate professor in

mechanical engineering, went on to become dean of Engineering, vice president for Academic Affairs, president of ULowell in 1981 and, in 1991, chancellor of UMass Lowell.

In announcing his retirement to the community recently, he said, "I love my job" but concluded that "after 25 years it's time to retire."



▲ William T. Hogan

The Student Health Committee Issues First Annual Report

What is the State of Student at UML?

The campus Student Health Committee published its first annual report this spring, making a number of recommendations intended to promote improvements in student health and health-related concerns on campus.

The committee's charge was to assess the physical and mental state of students' health, report that status to the University community and recommend improvements to health and counseling services as well as any additional programs needed.

Committee members are Joyce Gibson, associate vice chancellor for Academic Services, Nicole Champagne, assistant professor, School of Health and Environment (SHE); Noel Cartwright, director, University Counseling Center; Julie Handy, an undergraduate in SHE; Nancy Quattrocchi, director of University Health Services; and David H. Wegman, dean, SHE.

The committee, which focused its analysis on health behaviors that impact academic performance, concluded that the state of UMass Lowell student health is normal, in almost all respects. Lowell students match the norms for the health-related behavior of college students across the country.

Typically, students at UML and across the country report that getting too little sleep, drug use (including the use of alcohol, marijuana and cigarettes) and depression are the behaviors that have the most impact on their academic performance.

Students are making good use of the health services now available. In 2004, Student Health Services (SHS) handled about 280 visits per month, while the Counseling Center (CC) annually sees about 400 students for 1,600 visits.

"When students come to us for treatment or consultation, we give them a lot of very good information. The real problem is the students who never come to us," says Quattrocchi.

The Committee recommended developing an integrated and appropriately-staffed student health program and increasing the staffing levels at both SHS and CC.

All 10 committee recommendations have been accepted. Those include making this a standing committee with

responsibility to oversee student health programs, institutionalizing the annual participation in the National College Health Assessment survey and conducting specific analyses of student fees for health services, the impact of medical insurance on students' use of campus services and the feasibility of expanding health-related services to continuing studies and online students.

"For a long time," says Gibson, "we've had individuals and offices doing their work without one central place to coordinate it. This assessment was our first opportunity to look across the campus at what's happening."

Wegman concurs. "Nancy and Noel have been aware of these problems for some time, but we needed the report to identify both the scope of the need and its seriousness," he says. "We need to work hard to achieve both immediate and long-term goals. One important priority will be to identify physical facilities that permit an appropriate environment for delivery of all our health-related services on campus."

The Student Health Committee Report and the Executive Summary can be viewed on the web. Follow the link from the front page of either the Student Health Services and Counseling Center page.



▲ Members of the Student Health Committee, which recently issued its first annual report, include, from left, Noel Cartwright, David Wegman, Nicole Champagne, Nancy Quattrocchi and Joyce Gibson. Julie Handy, an undergraduate in the School of Health and Environment, is also a committee member.

University Honored For Green Efforts

UML Becomes First State Agency to Purchase Renewable Energy

UML was recently honored for its environment leadership by the Lowell State House delegation and state and federal environmental agencies.

At a reception in Cumnock Hall, Sen. Steven Panagiotakos, Rep. Thomas Golden and Rep. Kevin Murphy lauded UML for being the first state agency to purchase renewable energy.

Panagiotakos said, "In the area of renewable energy and having a social conscience, this is far and away the best agency we have in the Commonwealth of Massachusetts."

In February, the University signed a three-year contract for renewable energy certificates. The amount of energy purchased will account for approximately 13 percent of the electrical load on campus. This is also enough energy to power all of the University's dorms.

Also on campus to honor UML were representatives of the Executive Office of Environmental Affairs, the Environmental Protection Agency and an

organization called Think Energy.

"No campus has done more than UML in reducing green house emissions. We are hopeful that others will follow UML's model," said Eric Friedman, director of state sustainability at the Executive Office of Environmental Affairs. "The amount of greenhouse emissions that UML has reduced is the equivalent of removing 900 cars from the road for a year."

Friedman presented Vice Chancellor of Facilities Diana Prideaux-Brune with two grants for nearly \$20,000 to support the use of solar power at the University. The money will help the university install solar panels on the roof of Ball Hall and create a more energy-efficient feedwater pump at the heating plant on UML South.



▲ Vice Chancellor of Facilities Diana Prideaux-Brune (second from left) receives citations from members of the State House delegation, from left, Sen. Steven Panagiotakos, Rep. Kevin Murphy and Rep. Thomas Golden.

UML Campus Transformation Project

The Transformation Project made strides this past year, and changes are on the way. To read the whole story go to www.Uml.edu/enews for the next installment in a series on the Transformation teams' efforts.

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Assistive Tech Design Fair Packs Cumnock With Ingenuity

High School Students Use Skills to Help Others

Cumnock Hall auditorium was packed—that was the first impression for visitors to the annual Assistive Technology Design Fair. Step into the crowd, though, and each project on display told a compelling story of someone in need and young people who turned creative energy and sustained effort into meeting that need.

The Design Fair is sponsored by the Francis College of Engineering and led by Douglas Prime, director of K-12 educational outreach for the college. In four years, it has grown from a few teams at two nearby schools, to more than 100 students from a dozen schools across the state.

"The quality of ideas and choice of projects just keep getting better and better," says Prime, whose own enthusiasm seems boundless. "Did you see the mobility rocker? The Swampscott team created this modified skateboard with a pivot device that fits on a wheelchair for a boy with muscle spasticity; he can push down to exercise. They solved the problem, and it's beautifully produced and cool looking."

Another standout was "Open Sesame," an automatic door opener that a young boy in a wheelchair can use to enter his home by himself, after school. Just two students worked as a team to create the device—now installed and working perfectly.

The program begins with an introductory event in January, led by

Prime and faculty and staff in the Assistive Technology Program. Participants gain an overview of the design process: the brainstorming of ideas, the evaluation of designs, the problem solving and trouble shooting. This year, senior engineering majors demonstrated an innovative wheelchair that can change seat heights.

After the teams submit their problem statements and begin work-



▲ Students from Swampscott High School with a Mobility Rocker exercising device.

ing, the next milestone is the design review. Working engineers from M/A-COM (a division of Tyco Electronics) and from Teradyne volunteered to visit the participating schools and conduct reviews, a process that "the students found tremendously helpful," says Prime. "They had to present and defend their solutions; it was a real engineering review."

Prime notes that the teams are organized in a variety of ways, from volunteer after school programs to being fully integrated into the class curriculum.

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President Wilson Spends a Day on Campus

He Discusses Search Process and Takes Questions

Beginning with an interview on WUML's Sunrise show, University of Massachusetts President Jack Wilson spent a day on campus, meeting with faculty, staff and students, to explain the process for replacing retiring Chancellor William T. Hogan.

Wilson said the first step is to appoint an interim chancellor. He said he was "95 percent certain" that the interim chancellor would not be a candidate for the permanent position. "Why? Twenty-five years," he said, referring to the amount of time Hogan—"very strongly and very well"—has led the University. Wilson said the campus needs "a little time to go through that transition—so we don't face the abrupt shock of change." He said he would name an interim chancellor "in time for someone to step in the third of July"—Hogan's last day—and that the interim should be someone who "knows the area," but not necessarily someone who already works at the University.

Meanwhile, a search committee will be appointed over the summer; an executive search firm will likely be hired; and, after a six- to 12-month search, a final list of candidates for permanent chancellor will be brought to Wilson. The president said he will then recommend one candidate to the UMass Board of Trustees. "Compare it to a presidential cabinet appointment," he said, indicating that the board could

then ratify or reject his choice. A rejection would send the process back to the drawing board.

Wilson said the search committee will likely consist of about 12 to 20 representatives of faculty, staff, students, trustees and community members, among other campus constituencies. Of the search Wilson said, "We're going to hold ourselves to world standards—a world standard applied to this region."

About 50 faculty and about 70 staff gathered at back-to-back open forums to hear Wilson speak and ask questions. Wilson also met with Chancellor Hogan, vice chancellors, deans and chairs, the Faculty Senate, and student leaders. He said he had not yet named an interim chancellor because "I want to hear from everyone up here first." Wilson encouraged all to make nominations—or the search committee, for interim chancellor and for chancellor—by emailing him at UMLSearch@umassp.edu



▲ University of Massachusetts President Jack Wilson talks with Director of Human Resources Jack Giarusso following a meeting with staff in Alumni-Lydon Library.

PeopleSoft Team Nears Upgrade Completion

Tired of Data Entry? Fret No More.

The PeopleSoft team is nearing completion of a major upgrade in Finance, including implementation of a new module in Grants Management.

"All these system upgrades have a single goal—to make the support structure within which we do our work, seamless, not a barrier," says Louise Griffin, vice chancellor for administration and finance. "All the changes are leading to a standard of best practices in higher education. We're working toward accuracy, ease of process and internal controls that are not restrictive."

"Individuals will be more empowered and will be held accountable, rather than working within a system of tight controls."

Procurement will be a prime example, as the system moves to a web base.

Tired of data entry? Fret no more. From the desktop, you will be able to point and click to fill out purchase requisitions from approved vendors, with no need to bid. The long-term goal is to have 25 catalogues loaded and interactive, for purchase of all types of lab and research equipment, although sole source preferred vendors purchase will still be available.

In the Grants Management module, proposals will be built into the accounting system, allowing for electronic routing.

The staff members dedicated to making the changes have been working three days each week in

Shrewsbury, coordinating with the other UMass campuses and the President's Office. Working group leaders include David Mann, Nancy Desjardins, Lucy Moody and Linda Gladu Ennis on Grants Management; and Roberto Miller, Denise Anastopoulos and Jeannie Tremblay on Finance.

Few gains come without pain, so A&F is planning a phased transition.

The new accounting structure begins with the new fiscal year and will require changes in department IDs. The team will hold open information sessions in May and June, that will be useful to anyone working in a service center or who produces reports.

Training for grants management and the new financial system starts in July and August, and full implementation is planned for late fall.



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